

REMARKS

Applicants have added new claim 41 directed to a field-effect transistor to define that the channel layer of the field-effect transistor has a metal chalcogenide film which is prepared from a hydrazinium-based precursor.

Claim 41 further defines that the hydrazinium-based precursor is formed by either contacting a metal chalcogenide and (i) a hydrazine compound or by contacting a metal chalcogenide and (ii) first an ammonium salt compound and thereafter a hydrazine compound to produce a solution of a hydrazinium-based precursor of the metal chalcogenide.

The solution of the hydrazinium-based precursor is applied onto a substrate to produce a film of the precursor, which is annealed to produce the metal chalcogenide film.

Applicants have added new claim 44 directed to a method of preparing a metal chalcogenide film in a field-effect transistor from a hydrazinium-based precursor and to further define that the hydrazinium-based precursor is formed by either contacting a metal chalcogenide and (i) a hydrazine compound or by contacting a metal chalcogenide and (ii) first an ammonium salt compound and thereafter a hydrazine compound to produce a solution of a hydrazinium-based precursor of the metal chalcogenide.

The method further includes steps in which the solution of the hydrazinium-based precursor is applied onto a substrate to produce a film of the precursor, which is annealed to produce the metal chalcogenide film.

New claims 42, 43, 45 and 46 are added to further define the hydrazine compound and the annealing conditions that are sufficient to produce the metal chalcogenide film, i.e., a temperature from about 25 °C to about 500 °C.

Support for the newly presented claims 41 and 44 is found in claims 1, 16, 26 and 40, also on page 10, line 10, to page 13, line 20 and throughout the specification. Support for the newly presented claims 42, 43, 45 and 46 is found on page 18, lines 14-17, of the specification, where it is stated:

"The annealing step is carried out at a temperature and for a length of time sufficient to produce the metal chalcogenide film. Preferably, the temperature is from about 25 °C to about 500 °C. More preferably, the temperature is from about 250 °C to about 350 °C."

Further support for the temperature is found in claims 13, 23 and 36-38 and throughout the specification and support for the hydrazine compound is found in claims 1, 16, 26 and 40. No new matter has been introduced by the amendments.

Accordingly, examination of the pending claims an early indication of the allowability of all pending claims is earnestly solicited.

Respectfully submitted,

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